

FALL CONVOCATION
1974-1975

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The opening of the nineteenth year of the University of Dallas, which these ceremonies mark, comes at a time when many crises are behind us. The student revolt of the sixties, the racial riots, the burning of cities, the Viet Nam War--these are fading into the past, and now the energy crisis has waned and the political transgressions of the Nixon administration have been swept aside. The problems of inflation remain to remind us we are not into a time of total tranquility, but there is sufficient equilibrium to allow us time to look around.

Earlier in the summer I had occasion to speak to the Dallas scholars about the very severe crisis our society will face twenty years from now. That rather sobering reflection started a train of thought about the reason for the kind of education offered at the University of Dallas and I should like to chase that train a little farther down the track.

I suppose you recognize that not every one is supposed to go to the University of Dallas. The ones who are meant for our kind of education are not as easy to spot as a Camel Filter smoker I admit; they seem much the same as every one else. Yet I suspect the characteristics are much more definite than any of us realize. I pointed out to our faculty a week ago that for the last fifty years--perhaps the last hundred--one in seven

persons of college age attended private colleges. Even when state school attendance was small, when only about 20% went to college at all, every seventh person of college age attended a private institution. And as the ratio changed from 20% to 25% to 33% up to the present time when about 50% of the college age population attend an institution of higher learning, still the same one in seven choose private, independent colleges. The ones who decide to come to this campus are even more select. Now I am certain that every one of you considered a state school and it is seemingly only an accident that you are here, but in truth there is only a handful of schools into which most of you would really fit. I am realist enough to know that the kind of person you will be when you graduate from our university is quite different from what you would have been had you graduated somewhere else, and I am anticipating what will have happened when I say that you have characteristics which select you as one in two thousand destined for the University of Dallas, but when the great game of statistics is played backward into individual histories, it really seems that you had little choice. Here you are.

You are here because of the kind of person you are and will be. You have a certain kind of role to play in history and you are here to get ready for it. One of the paradoxes of education is that a school such as this one that gives a great deal of personal attention to students, where administrators

and professors think and talk about an individual student even during the summer--what progress he has made, what program he should follow--is, in reality, much less concerned with the individual at least in one sense than with culture, with the ongoing of the good in the human community, whereas the large, impersonal schools aim their education toward personal success. But, of course, that is one of the features that brought you here: you want to be part of an enterprise of vast importance, quite aside from whatever attention you may get.

The role you will have to play is far more difficult than any my generation has had to assume--more difficult than any, perhaps, in all past history. I could point to some predecessors--the Russia of 1917, Rome at its fall; but in many ways, the problems you will face will be more severe, something like an accumulation of all these cataclysms. Like Rome, you will have a civilization that has worn itself out and may face invaders of a different way of life from the east. Like Russia you will have a government that cannot cope with its internal problems and may fall prey to radically new theories of governance.

I am no doubt giving you an overdramatic statement of the situation you will face. Let me illustrate the problems in more prosaic terms.

If I attempt to balance a pencil on its point, it falls over. That very delicate condition of equilibrium when I have

the pencil balanced is unstable: that is, the slightest disturbance brings into play forces which increase the disturbance--for you trigonometricians, the torque is proportional to the sine of the angle of inclination. If the pencil is one with which I have made few mistakes, the eraser end is flat and I can balance it on that end. The bigger the eraser, the easier I can balance it. It is stable up to a point: that is, a small disturbance brings into play forces which tend to restore it towards its equilibrium point, and it rocks back and forth but doesn't fall over. Push it beyond a certain point, however, and it falls. We speak of this condition as metastable. Most useful things in our existence are metastable. All living things are. Organic material decays or burns because it has this kind of quasi-stable instability. So do atoms. So, too, do all things economic or political. One thing, even one system falling over is of little moment--a single domino. But if it falls into another one, in a long chain, the whole line falls. If you will imagine, for a moment, a whole field of dominoes arranged in such a way that any one domino always trips two others, then the tipping of one tips two, four, eight, sixteen, and so on, and the whole field blows up in a hurry. The atom bomb works like this; it is a general description of any explosive situation.

The riots of the sixties were like this to some extent, but the various elements which were or could have been

unstable, the students, the minorities, labor, the army--were well isolated, and one did not touch off another. Similarly we can depose a president, who falls with several of his henchmen, but the judiciary and legislators--even most of the administrators are far enough removed not to get tripped up. The government rocks a little but remains upright.

Now, from my armchair as physicist and amateur economist, as I see the time ahead, instabilities of various sorts will be growing, and in a little more than twenty years from now, not only will the number of instabilities be large, but they will be connected one to another by shared interests and dependencies--the government to industry to labor to minorities to students. A disturbance at one place will send the whole pack crashing down. In such an event, the political and financial structure would be shattered and chaos would reign. You who are now students would just be coming into positions of power when all this would occur. You will, then, inherit a situation not of your making; and of course you must do all you can to prevent it. But I think you had best be prepared for it.

What makes the situation more severe than those major disturbances of earlier epochs is the possible eventual solution--a dehumanized society. The same perennial shortages, deprivations, and inequities will be present to rock the domino as in the past but always before these difficulties

were essentially local in place and in time. There were new places to go, new cities to found, more sources of energy to develop, new supplies of food which technology could yield. A new idea could blossom and benefit materially every man on the globe. In the situation which I have suggested that you are likely to face, few such possibilities will exist. We have begun to use up the world. Oh, there is more oil, much more coal, and there will be nuclear energy, but not fusion as we had expected--at least not in time to prevent the collapse. And we can increase the food supply, although we may do without beef. But we are aware of limits, and, already we experience the small precursors which will recede temporarily but will not, as in the past, dissolve into abundance. The classical solution to shortages is the raising of prices--the old law of supply and demand. I know of a company that bought a copper smelting process from low grade ore a few years ago--a very foolish buy, it seemed, since it could easily be shown that there was no way for it to operate profitably. The company has made no improvements, reduced no costs, but the increased price now has made the venture a first-rate investment. Copper is scarce and its price goes up. This moving up in the list of priorities for critical items works well except when all things are short. There is no moving from steel to plastics when plastics are as scarce as steel. When everything must move up in priority, the pressure will exceed the limits of the container and something will burst.

My purpose today is not to talk economics with you, or politics--not to urge on you a defense of free enterprise and individual freedom in a time of crisis, or to point out to you the snares and delusions of a planned economy when it will seem the only possibility for survival (though these topics are worth long and careful study). Instead I would look beyond that difficult time, to the life you will lead when the crisis is over. Somehow you will survive. As a generation, you will make all the complex adjustments necessary in order to live in equilibrium with the demands a recalcitrant nature places on you. Life will go on, and though your education here will surely fit you practically and philosophically for the time of emergency, it is for that life afterward that education on this campus is designed.

I have said that our chief concern is the survival of the culture rather than your personal success. It is not culture as a museum of the past that concerns us, not even as a secure repository of great works. If that were the aim, we could bury a great library in a time vault. Rather it is culture as the living, vital enterprise of man, which can survive only by being inculcated in living people. Not so much the plays of Sophocles must be passed on as the understanding of the plays, penetrating deeper into the wisdom of the race with each generation.

I would not have you suppose that the culture I am talking about is, in any way, a decoration on life to make it pleasant

or pretty, while the really essential existence pursues its separate mundane course. No, the act of understanding of which I speak involves the very reasons for existence; and in a time of crisis, when a society is in transition from one stage to another, it is this understanding which is the most practical of all abilities. No technician however skilled, no expert however well informed can guide decisions which have no precedent. Only a wisdom rooted in the most basic aspects of reality can suffice for such a task.

I was disturbed by last Saturday's newspaper account of our new President's address on a college campus in which he plumped for practicality in education. I recognize that the speech was a ploy, part of a strategy to build his image as a fearless, forthright leader, not afraid to stand before the American Legion and urge amnesty for deserters or go before academicians and sponsor vocational skills. And, of course, his remarks were the work of advisors and speech writers. But nonetheless his speech revealed such a deep misunderstanding of the purposes of education and such a vast miscalculation of the state of society as to trouble me about decision-making in high places. Even by his own analysis of our condition, what is needed is the most fundamental of scientists--not technicians--the most philosophical of economists--not accountants--and by extension, I should say the most inspired of artists--not package designers. More workers for industry provide no solution

at all for the real problems ahead of us. What is called for is a different way of life, a different approach to values, a deeper realization of the proper ends of mankind.

Perhaps President Ford was right in being critical of liberal education. It has, in large measure, failed in our time to do its job. But rather than being abandoned, it must be turned into its right path. This is the most crucial task of our day. For that task we must have leaders who understand the perennial struggle for right order; we must have heroes, and, unlikely as it now seems to you, that is a role which will fall to you who have apprenticed yourselves to the kind of education set forth on this campus.

You learn the hero's trade in every course you take--in mathematics as much as in philosophy--and though I might prefer to draw my analogies from physics, I suspect literature--the second major at my house--is a little more direct, because it sets forth in some clarity the paradoxical role of the hero. Many of you have just read F. Scott Fitzgerald's Great Gatsby, seen the movie, and discussed its meaning. Who do you say is the hero? Certainly Gatsby is the hero of the story, the protagonist, a person of magnitude with a tragic flaw, who goes to his destruction taking others with him, in a very classical Aristotelian sense. Gatsby represents an order that is failing. He is Lancelot in quest of the grail. He is the stuff of tragedy and he is destined for failure. But there is another

kind of hero present, someone to whom the story really happens, in whom it takes its shape and who is instructed by it. Nick Carraway, who meant to be only a observer, because of what he sees. changes his way of life and takes on new resolution. In the framework that lies outside the novel, he is the hope for tomorrow.

Do you see what I say lies in store for you? You have instruction before you here on this campus and will be instructed by life; you are asked not the hero's death but the heroic life--to live in understanding. You must learn, as Nick put it, "to reserve all judgements" and to know that "Reserving judgements is a matter of infinite hope." Your education here prepares you for this life. Like Nick's father, I could say to you, with a little irony, "remember that all the people in the world haven't had the advantages you have had," but I think you have or will come to have a balanced, slightly amused but wholly genuine appreciation for the education which comes to you by grace from parents, from professors, and from life.

You are different. As Dostoevsky says of his hero, you carry within you "the very heart of the universal," which will hold you steadfast "when other men of your epoch have been temporarily torn from it."

Now in the academic year 1974-75, you are preparing for that time.